

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application.

Claim 1 (currently amended) A point-to-point millimeter wave communication system comprising:

A) a first millimeter wave transceiver system located at a first stationary site capable of transmitting and receiving to and from a second stationary site through atmosphere digital information at rates in excess of 155 million bits per second during normal weather condition, said first transceiver comprising:

- 1) a first dish antenna producing a beam having a half-power beam width of about 2 degrees or less,
- 2) a first tracking system comprising a modified version of a radar tracking system chosen from a group of tracking systems consisting of:
  - a) a monopulse tracking system,
  - b) a conical scan tracking system, and
  - c) a sequential lobing tracking system;and

B) a second millimeter wave transceiver system located at said second site capable of transmitting and receiving to and from a first site digital information at rates in excess of 155 million bits per second during normal weather ~~condition~~ conditions, said second transceiver comprising:

- 1) a second dish antenna producing a beam having a half-power beam width of about 2 degrees or less,
- 2) a second tracking system comprising a modified

version of a radar tracking system chosen from a group of radar tracking systems consisting of:

- a) a monopulse tracking system,
- b) a conical scan tracking system, and
- c) a sequential lobing tracking system;

wherein said first transceiver is configured to transmit within a first millimeter wave frequency range higher than 60 GHz and receive within a second millimeter wave frequency range higher than 60 GHz but not overlapping said first frequency range and said second transceiver is configured to transmit in said second millimeter wave frequency range and receive in said first millimeter wave frequency range and

1. wherein said first tracking system is configured to determine angle error by analysis of wave front signals or by analysis of amplitude modulation of signals from said second transceiver and said second tracking system is configured to determine angle error by analysis of wave front signals or by analysis of amplitude modulation of signals from said first transceiver.

2. (original) A system as in Claim 1 wherein at least one of said tracking dish antennas comprises a monopulse tracking system.
3. (original) A system as in Claim 1 wherein each of said first and said second tracking dish antennas comprises a monopulse tracking system.
4. (original) A system as in Claim 1 wherein at least one of said tracking dish antennas comprises a conical scan tracking system.
5. (original) A system as in Claim 1 wherein at least one of said tracking dish antennas comprises a sequential lobing tracking system.
6. (original) A system as in Claim 1 wherein said first transceiver system is configured to transmit and receive information at frequencies greater than 57 GHz.

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7. (original) A system as in Claim 1 wherein said first transceiver system is configured to transmit and receive information at frequencies greater than 90 GHz.
  8. (original) A system as in Claim 1 wherein said first transceiver system is configured to transmit and receive information at frequencies between 92 and 95 GHz.
  9. (original) A system as in Claim 1 wherein one of said first and second transceiver systems is configured to transmit at frequencies in the range of about 92.3 to 93.2 GHz and to receive information at frequencies in the range of about 94.1 to 95.0 GHz.
  10. (currently amended) A system as in Claim 1 ~~and~~ further comprising a ~~back-up~~ backup transceiver system operating at a data transmittal rate of less than 155 million bits per second and configured to continue transmittal of information between said first and second sites in the event of abnormal weather conditions.
  11. (original) A system as in Claim 10 wherein said backup transceiver system is a microwave system.
  12. (currently amended) A system as in ~~Claim 12~~ Claim 11 wherein said backup transceiver system is configured to operate in the frequency range of 10.7 to 11.7 GHz.
  13. (currently amended) A system as in ~~Claim 12~~ Claim 11 wherein said backup transceiver system is configured to operate in the frequency range of 5.9 to 6.9 GHz.
  14. (currently amended) A system as in ~~Claim 12~~ Claim 11 wherein said backup transceiver system is configured to operate in the frequency range of 13 to 23 GHz.
  15. (currently amended) A system as in ~~Claim 1~~ Claim 1 wherein said first and said second sites are separated by at least one mile.
  16. (original) A system as in Claim 1 wherein said first and said second sites are separated by at least 2 miles.

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17. (currently amended) A system as in ~~Claim 1~~ Claim 1 -wherein said first and said second sites are separated by at least 7 miles.
  18. (currently amended) A system as in ~~Claim 1~~ Claim 1 -wherein said first and said second sites are separated by at least 10 miles.
  19. (currently amended) A system as in ~~Claim 1~~ Claim 1 -wherein each of said first and said second transceiver ~~are~~ is configured to transmit and receive information at bit error ratios of less than  $10^{-10}$  during normal weather conditions.
  20. (original) A system as in Claim 1 wherein both said first and said second transceiver systems are equipped with antennas providing a gain of greater than 40 dB.
  21. (original) A system as in Claim 1 wherein both said first and said second transceiver systems are equipped with antennas providing a gain of greater than 45 dB.
  22. (original) A system as in Claim 1 wherein the antennas in both said first and said second transceiver systems are configured to provide gains of greater than 50 dB.
  23. (original) A system as in Claim 22 wherein at least one of said antennas is a Cassegrain antenna.
  24. (original) A system as in Claim 22 wherein at least one of said antennas is a prime focus parabolic antenna.
  25. (original) A system as in Claim 22 wherein at least one of said antennas is an offset parabolic antenna.
  26. (currently amended) A system as in Claim 1 wherein said first and second systems are capable of transmitting and receiving at rates in excess of 1 billion bits per second and the antennas of both systems are configured to produce ~~beam~~ beams -having half-power beam widths of about 0.36 degrees or less.